

Subject Matter Code: E-01d Direct Dischargers

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Comment ID: CTR-011-001c

Comment Author: City of Simi Valley

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: E-01d Direct Dischargers

References: Letter CTR-011 incorporates by reference letters CTR-027 and CTR-034

Attachments? Y

CROSS REFERENCES C-13

C-24

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Comment: The City of Simi Valley discharges approximately 10 million gallons per day (mgd) of tertiary-treated wastewater (as well as municipal storm water) to the Arroyo Simi, an effluent dependent water body. Through much of the year, Arroyo Simi is dry several miles downstream from the City. The Arroyo Simi Characterization Report, completed by the City in 1995, concluded that the arroyo does not support a significant fishery, and observed only arroyo chub, mosquito fish and blunt-nosed minnow in the stream. Although designated as a potential municipal water supply in the Basin Plan, the arroyo waters are not used for municipal purposes. Effluent monitoring are limited, but available data indicate that the City's discharge may have a reasonable potential to exceed the proposed aquatic life criteria for several metals and the proposed human health criteria for several carcinogens.

Since Simi Valley is largely a residential community with supporting commercial development and little industry, and since the City already has an effective pretreatment program, it is unlikely that pollution prevention efforts would effectively reduce the problematic constituents. More likely, the City would be faced with end-of-pipe treatment controls such as lime precipitation and carbon adsorption to achieve the proposed criteria. The costs would undoubtedly be significant and the benefits relatively minor.

Under these circumstances, it appears reasonable to adopt criteria for Arroyo Simi, and similar effluent dependent waters, that are reasonably achievable without costly end-of-pipe controls and that reflect the actual use of the water (i.e., generally such waters are used for fishing or drinking). One way to address this issue, consistent with the requirements of the Clean Water Act, would be to adopt specific human health criteria for Arroyo Simi and other effluent dependent streams based on a cancer risk coefficient of  $10E-5$  or in some cases  $10E-4$ . Based on the limited data collected by the City, risk levels of  $10E-4$  would have to be adopted for dioxins, aldrin, alpha-BHC and 4,4,-DDD (see Table 1). Risk levels of  $10E-5$  would be sufficient for chloroform and endoslfan 11 (Id.).

Response to: CTR-011-001c

See responses to CTR-004-003, CTR-021-008, and CTR-056-018.

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Comment ID: CTR-035-008c

Comment Author: Tri-TAC/CASA

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97  
Subject Matter Code: E-01d Direct Dischargers  
References:  
Attachments? N  
CROSS REFERENCES E-01g08  
E-01e  
E-01m  
E-01h  
E-01c

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Comment: Finally, we have serious concerns about the accuracy of the draft Economic Analysis and the estimates of the costs and benefits of the draft CTR (see detailed comments in Attachments I and 2). Our primary concerns related to the cost analysis include 1) that the case studies on which the cost analysis is based do not adequately represent the actual population of POTWs in California; 2) the omission of costs that could be incurred by many sectors that contribute to overall loadings, and, hence, can be expected to have to reduce their loadings (e.g., non-SIU indirect dischargers, municipal and industrial stormwater dischargers, agricultural activities, and other nonpoint sources of CTR-regulated pollutants); 3) the use of numerous assumptions that underestimate costs; and 4) the capricious removal of costs that exceed threshold values by assuming that regulatory relief measures will be granted, despite the lack of any proposed regulatory relief trigger in the proposed regulation.

To illustrate the degree of underestimation of costs for the POTW sector alone, we looked at potential compliance costs for the POTW sector. We found that the potential costs for 23 major POTWS. on an annualized basis, may reach \$400 million. We believe that this analysis demonstrates that the potential cost consequences of compliance with effluent limits based on the proposed CTR criteria would easily exceed the \$ 100 million annual cost threshold, especially when the costs of all 313 POTWs in the State are estimated. Thus, we believe that EPA must conclude that the proposed CTR could have significant economic impacts on local governments.

Response to: CTR-035-008c

See responses to CTR-021-005c, CTR-032-004, CTR-040-039, CTR-021-006b, CTR-040-037, and CTR-059-018.

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Comment ID: CTR-035-061  
Comment Author: Tri-TAC/CASA  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01d Direct Dischargers  
References:  
Attachments? N  
CROSS REFERENCES

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Comment: Weaknesses in Cost Analysis The report's cost estimates exhibit a number of significant weaknesses, as follows:

\* The Analysis does not account for changes in discharges over time. Changes in the volume and characteristics of discharges resulting from demographic,(\*9) economic, and policy trends are ignored in the analysis. For example, existing economic conditions may lead to greater discharge volumes; electric industry restructuring in California may induce different operating patterns among the state's generators (e.g., Hunter's Point), and air quality rules may alter petroleum refining processes (e.g., reformulated gasoline). These impacts may be region- (e.g., Silicon Valley) or industry-specific.

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(\*9) For example, the state may add another six million Californians between 1996 and 2005. See Center for Continuing Study of the California Economy, California County Projections, 1997 Edition.

Response to: CTR-035-061

EPA estimated annual (steady-state) benefits and annualized costs as well as 20- and 30-year streams of benefits and costs to account for the differences in the time frame for experiencing benefits and costs (i.e., up-front capital cost and a phase-in of benefits). EPA did not forecast economic, demographic, or policy changes across these time periods. Such a forecast would involve a great deal of uncertainty. However, EPA does not foresee changes in these variables negatively impacting the anticipated ratio of benefits and costs. Rather, EPA believes that future increases in population and economic activity will most likely increase the benefits of achieving standards for toxic pollutants in California waters compared to the cost of controls.

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Comment ID: CTR-045-012a  
Comment Author: Sausalito-Marín Sanitary Dist.  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/24/97  
Subject Matter Code: E-01d Direct Dischargers  
References:  
Attachments? Y  
CROSS REFERENCES E-01c

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Comment: Based on our analysis of the impact of the proposed CTR, we will need to utilize reverse osmosis to meet the proposed CTR limits for copper. Based on this modification, we estimate that our potential annualized costs for compliance will be approximately \$900,000. These costs are significantly higher than EPA's estimated costs per plant of \$27,000 per year to \$480,000 per year. Thus, we strongly believe that the draft Economic Analysis significantly underestimates the potential statewide costs associated with adoption of the CTR and should be revised.

Response to: CTR-045-012a

See responses to CTR-056-018 and CTR-045-012b.

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Comment ID: CTR-052-006  
Comment Author: East Bay Dischargers Authority  
Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01d Direct Dischargers

References: Letter CTR-052 incorporates by reference letters CTR-035 and CTR-054

Attachments? Y

#### CROSS REFERENCES

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Comment: EPA has greatly underestimated the costs of compliance in the EA. Information developed by CASA and Tri-TAC for just 23 POTWs indicates that annualized costs for those facilities may reach \$400,000,000. These are the 23 plants that have had the opportunity to fully review their effluent data. Using this cost data, and extrapolating it for all affected California POTWs leads to a potential cost ranging from \$570,000,000 to \$995,000,000, depending on the assumptions used.

Response to: CTR-052-006

EPA disagrees with the \$400 million cost estimate, however, neither EBDA nor CASA/Tri-TAC provide any details of the CASA/Tri-TAC analysis (e.g., names of the 23 major POTWs, the pollutants assigned costs, and cost estimation methodology), thus EPA cannot evaluate the \$400 million cost estimate. In CASA/Tri-TAC's comment, Attachment 1 notes that CASA "assumed that regulatory relief options may not be available, and that, based on the pollutants causing compliance problems, pollution prevention and treatment plant optimization might not be sufficient to reliably achieve compliance." However, CASA/Tri-TAC did not provide any data substantiating this assumption. EPA's cost estimate in the Economic Analysis (EA) of the final CTR for all California POTWs affected by this rule ranges from \$7.8 million to \$41.6 million in the low and high cost scenarios, respectively. EPA stands by its cost estimates provided in the EA of the final CTR which is based on available permit, permit application, and effluent monitoring data evaluated using a cost decision methodology which allowed for a case-by-case evaluation of costs for a sample set of facilities.

See also response to CTR-040-039.

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Comment ID: CTR-052-011

Comment Author: East Bay Dischargers Authority

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01d Direct Dischargers

References: Letter CTR-052 incorporates by reference letters CTR-035 and CTR-054

Attachments? Y

#### CROSS REFERENCES

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Comment: Impact on East Bay Dischargers Authority Ratepayers

The Authority and its member agencies serve approximately 700,000 people in southern and eastern Alameda County. Using an annualized cost of \$44,257,000 results in an annual cost of \$63.22 per person per year. Using an average of 3.25 persons per household results in an annual cost of \$205.48 per household per year. Current sewer rates for Authority agencies are as low as \$113 per year. Compliance

with the CTR would result in a new sewer rate of \$318.48, or an increase of 282%. Clearly, the costs do not justify the benefits.

Response to: CTR-052-011

EPA disagrees with the \$44 million annualized cost estimate for Alameda County, however, EBDA does not provide any details of how this cost was estimated (e.g., pollutants requiring reductions, pollutant concentrations, treatments required), thus EPA could not evaluate the cost estimate. EPA's cost estimate in the economic analysis of the final CTR for all California POTWs ranges from \$7.8 million to \$41.6 million annually in the low and high cost scenarios, respectively. EPA stands by its cost estimates provided in the EA of the final CTR which is based on available permit, permit application, and effluent monitoring data evaluated using a cost decision methodology which allowed for a case-by-case evaluation of costs for a sample set of facilities.

See also responses to CTR-056-018 and CTR-005-004.

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Comment ID: CTR-066-016

Comment Author: Delta Diablo Sanitation Dist.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01d Direct Dischargers

References:

Attachments? N

CROSS REFERENCES

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Comment: The areas with which we find concerns and the requested changes include the following:

\* Based on our very preliminary analysis of the impacts of the proposed CTR, we will need to add at a minimum reverse osmosis treatment at the regional plant to meet the rulemaking. Based on this modification, we estimate that our potential annualized costs for compliance will be \$10,250,000. These costs are significantly higher than EPA's estimated costs per plant of \$27,000 per year to \$480,000 per year. Based upon this finding, we strongly believe that the draft Economic Analysis significantly underestimates the potential statewide costs associated with adoption of the CTR and should be revised.

Response to: CTR-066-016

See responses to CTR-056-018 and CTR-045-012b.

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Comment ID: CTR-081-005b

Comment Author: West County Agency

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01d Direct Dischargers

References:

Attachments? N

CROSS REFERENCES E-01d

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Comment: \* Based on the comments at the hearing of September 17, and our own estimates, the EPA's economic analysis has serious flaws and does not reflect the full costs for implementation of the CTR. The comments of the California Association of Sanitation Agencies should be given significant weight in this regard.

\* For example, the WCA plants will not be able to meet the new criteria for copper, lead, and nickel, as well as some organics. This is true even after maximizing source control, pollution prevention, and process control improvements. Both our plants would need additional "end-of-pipe" treatment, such as reverse osmosis.

\* Based on our analysis of the proposed CTR, we will need to implement reverse osmosis in order to meet the requirements of the proposed CTR. Based on this, we estimate that our potential annualized costs for compliance will be \$11,220,000. These costs are significantly higher than EPA's estimated costs per plant of \$27,000 to \$480,000 per year. Thus, we believe strongly that the draft Economic Analysis significantly underestimates the potential statewide costs associated with adoption of the CTR and should be revised.

Response to: CTR-081-005b

EPA disagrees that its Economic Analysis (EA) underestimates costs. West County Agency does not provide the details of their \$11.2 million cost estimate, thus EPA cannot evaluate its validity or conduct its own analysis. Based on EPA's sample of 14 POTWs in California, EPA predicts that the state-wide cost impact on POTWs would range from \$7.8 million to \$41.6 million per year. See the EA for details on the EPA's methodology and costs.

See responses to CTR-056-018, CTR-004-003, and CTR-045-012b.

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Comment ID: CTR-082-010

Comment Author: City of Burbank

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: E-01d Direct Dischargers

References:

Attachments? N

CROSS REFERENCES

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Comment: The subject rule has a significant impact on our facility discharge and the citizens of the City. We therefore present the following comments for your consideration to re-open the comment period for this rule in order to facilitate a more complete review by public and in particular by those in the POTW community:

\* Based on our analysis the impact of the USEPA proposed CTR will need significant in-plant

modifications, changes in effluent disinfection practices, and possibly incorporating nitrification and de-nitrification processes to fully comply with the proposed CTR. Based on these modifications, we estimate that our potential annualized costs for compliance will be around \$5,900,000. These costs are significantly higher than USEPA's estimated costs per plant of \$27,000 to \$480,000 per year. Therefore we strongly believe that the draft economic analysis significantly underestimates the potential statewide costs associated with adopting the CTR and should be revised.

Response to: CTR-082-010

See responses to CTR-056-018 and CTR-045-012b.

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Comment ID: CTR-085-019

Comment Author: Camarillo Sanitary District

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: E-01d Direct Dischargers

References:

Attachments? N

CROSS REFERENCES E-01n

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Comment: The District supports the following positions of CASA and SCAP where changes need to be made in the proposed California Toxics Rule:

Based on the District's analysis of the impact of the proposed California Toxics Rule, the District will need to add reverse osmosis to existing treatment processes to meet the proposed California Toxics Rule. Based on this modification, it is estimated that our potential annual costs for compliance will be \$2.97 million, including retirement of capital. This cost is significantly higher than the EPA's estimated costs per plant of \$27,000 per year to \$480,000 per year. Thus we strongly believe that the draft economic analysis significantly underestimates the potential costs associated with adoption of the California Toxics Rule and should be revised.

Response to: CTR-085-019

See responses to CTR-056-018 and CTR-045-012b.

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Comment ID: CTR-089-005

Comment Author: Las Virgenes Mncpl Water Dist.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: E-01d Direct Dischargers

References:

Attachments? N

CROSS REFERENCES

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Comment: While the draft regulations demonstrate clear progress on these and other issues, there remain some unresolved problems that could compromise our ability to serve our customers. We offer these comments in the hope of minimizing those potential impacts.

#### Adequacy of the Economic Analysis

We are, quite frankly, astounded that the draft CTR asserts negligible economic impacts as a result of the proposed regulations. Even a cursory examination of the criteria contained in the draft CTR suggest economic impacts well-beyond those assumed by the US EPA's economic model. These include over \$650,000 in estimated annualized costs to abandon existing chlorine disinfection facilities and replace them with some other disinfection method such as ultra-violet radiation or ozone, or the addition of GAC filters or air-stripping towers. Each of these modifications may create new and additional compliance problems with other state and federal regulatory requirements and standards, with unknown costs to mitigate them. Clearly the potential magnitude of these economic impacts argues against the use of a generalized model for estimating statewide impacts.

#### SUMMARY

We hope these comments will help to make the final CTR a better document and a better law. Overall, the draft CTR reflects substantial thought and effort on how best to implement the Clean Water Act's mandate of reducing pollutant discharges to the nation's receiving waters. The draft CTR clearly advances this goal, but our hope is that those agencies and parties most-directly affected by it will be allowed additional time to review it to their satisfaction. We strongly encourage a more detailed assessment of the actual economic impacts that could result from these new regulations. The ability of public utilities to fund new projects has never been lower, and every rate increase requires sound and well-founded justification. No ratepayer should be asked to shoulder the cost of new regulations without a clear and detailed explanation of what it is going to cost, and what benefits will result. State mandated costs require state funding.

We appreciate this opportunity to comment on the draft California Toxics Rule. Please do not hesitate call myself or Dr. Randal Orton in our Resource Conservation and Public Outreach Department to tell us how we can help you further.

Response to: CTR-089-005

EPA disagrees with the \$650,000 cost estimate to install a new disinfection method or additional treatment that will control chlorination/disinfection byproducts (DBPs) as EPA did not estimate that any sample facilities would need to install new equipment in order to ensure compliance with CTR-based effluent limits for DBPs. Of the 27 sample facilities examined, EPA assigned costs to 7 facilities for process optimization and to 4 facilities for pollution prevention efforts to control DBPs. EPA's estimated costs for process optimization for the sample facilities range from \$25,000 to \$230,000 depending on the size of the facility. Estimates for pollution prevention included costs for other, non-disinfection related pollutants and ranged from \$50,000 to \$2 million.

See response to CTR-035-061 and CTR-003-013.

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Comment ID: CTRH-001-027  
Comment Author: Michelle Pla  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: S.F. Public Utilities Com  
Document Date: 09/17/97  
Subject Matter Code: E-01d Direct Dischargers  
References:  
Attachments? N  
CROSS REFERENCES

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Comment: We're very concerned about the economic analysis. We understand that you can -- this is based on federal orders, executive order and some legislation, in that this is not the normal thing that you do, but we're really concerned that there are some really real significant flaws here.

I'm also very concerned that there's some real misleading of the people of California of what it's going to cost the water bodies in the state to meet these levels. And to say that you think it's going to be 84 million a year is entirely misleading.

It really concerns me that people are going to glom on that number, say, "Gee, this isn't going to cost us much," if you believe that economic analysis. There's very few sources of pollution which you address with the \$84 million. It is not looking at the sources and not looking at actually getting those water bodies to those levels. So I would really recommend that you be really careful about those numbers.

Put yourself in my situation. We know in San Francisco that we're going to have a problem meeting aldrin peaks (phonetic) and the dioxin.

We think -- we don't have exact numbers on this right now, but we think that if we have to go to a worst-case scenario -- in other words, if we cannot meet those numbers with source control, we cannot meet those numbers by alternatives, we'll have to -- have to go to carbon or something like this. That could cost \$100 million in -- up to 100 million in coastal costs, and \$1 million in O & M a year.

Now, I'm going to go to my board of supervisors and say, "Please allow me to pass a bond issue so that I can meet these discharge requirements for discharge to the San Francisco Bay." We're not talking about the Pacific ocean now, just the bay.

And they say to me, "If we give you that money to build those facilities, will the people that fish in the San Francisco Bay, that live in San Francisco, be able to eat the fish?"

And I'm going to say no. I can't guarantee that, because we're a minor source. We're less than 20 percent of 4 percent of the total sources of discharge to San Francisco Bay.

So I think you need to be careful about how you throw these numbers around, because it's going to put us in a position of never being able to do anything either.

You need to think about this economic analysis, because I don't think it's real. And I don't think the benefits that you've shown either are very real, and we'll make more extensive comments in our written form on that.

Response to: CTRH-001-027

See responses to CTR-054-013a, CTR-035-057, and CTR-038-003.

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Subject Matter Code: E-01d01 Cost Estmte by Commenter

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Comment ID: CTR-005-004

Comment Author: Novato Sanitary District

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/23/97

Subject Matter Code: E-01d01 Cost Estmte by Commenter

References:

Attachments? Y

#### CROSS REFERENCES

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Comment: 3. The proposed rule could cost the District between \$2.7 and \$7.1 million per year without providing significant benefits. The current Basin Plan for San Francisco Bay does not allow dilution for shallow water dischargers. A review of the Draft Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, September 12, 1997, indicates that the draft policy would allow the current Basin Plan dilution policy to continue. Under the zero dilution policy and other historic permitting practices of the San Francisco Bay Regional Board (e.g., the Board has not considered translators in establishing permit limits), the District would be unable to comply with the proposed copper criteria for aquatic life protection (CMC and CCC), the proposed nickel criterion for aquatic life protection (CCC), and the proposed human health criterion for mercury.

The District, in 1996, made a thorough analysis of the costs and benefits of complying with the proposed copper criterion of 3.1 ug/l dissolved copper and the 4.9 ug/l site-specific objective developed by the Regional Board staff. That analysis indicated that the least costly alternative to comply with these objectives would be to construct a deep water outfall at a capital cost of \$28 million and a total annual cost of \$2.7 million. This would have the effect of doubling our current sewer service charges. The deep water outfall would not reduce the mass of copper discharged to the Bay. The sole benefit would be to achieve the copper criterion in the immediate vicinity of the outfall (the area affected is on the order of 0.6 acres).

The next most cost-effective alternatives were to go to land disposal or reverse osmosis treatment, both of which would have a total annual cost of \$7.1 million. These alternatives would reduce the mass of copper discharged to San Pablo Bay by only 0.16%. The cost per toxic pound equivalent removed for the deep water outfall is infinite, since no copper would be removed. If one were to assume that the copper discharged to deep water is removed, the cost per toxic pound equivalent removed would be \$8,470/lb. For the alternatives that actually remove copper from the Bay, the cost per toxic pound equivalent removed would be \$22,300/lb for land disposal and \$28,500/lb for reverse osmosis. The detailed report containing this analysis is presented in Attachment 1.

In conclusion, the adoption of the proposed copper criteria for San Pablo Bay could, under the high-end cost scenario of State implementation, result in very high costs without providing any significant water quality benefit. The District would concur that the low-end cost scenario could be zero (i.e., if the Regional Board were to allow a dilution credit and metals translators).

Response to: CTR-005-004

The Novato Sanitary District estimate is out of the range of the costs EPA estimated for the same

industrial category and within the same range of discharge flow. However, the information submitted by the District is not sufficient to compare the facility with sample facilities of the same industrial category and flow range because existing permit limits for copper, nickel and mercury are not indicated in the comment supporting documentation. However, review of the NPDES permit issued in 1992, which was to expire in 1997, indicates that final effluent limits for copper, nickel and mercury are 2.9 ug/L, 8.3 ug/L, and 0.03 ug/L, respectively. Even though Novato was not a sample facility evaluated by EPA, it appears that these limits are likely to be more stringent than CTR-based limits that would be calculated for this facility using standard U.S. EPA implementation procedures such as those EPA assumed for the CTR EA. In the case of nickel, for example, the most stringent CTR criterion (dissolved) is 8.2 ug/L and a metal translator would be used to convert this criterion to total. Consequently, the CTR-based criterion would likely be less stringent than the existing limit and no costs would be attributed to the rule. In the case of mercury, the 1992 limit of 0.03 ug/L is already more stringent than a projected CTR-based limit of 0.05 ug/L.

If a facility chooses to calculate permit limits with consideration of metal translators or water effect ratios, the facility will not likely need to implement high cost alternatives such as deep water outfall, land disposal, or reverse osmosis. Moreover, U.S. EPA is aware that the use of metal translators to implement water quality criteria for metals does not constitute a regulatory relief alternative under the proposed Inland Surface Waters Policy. In practice, the use of metals translators may be a standard step for the calculation of effluent limits in the State of California and consistent with EPA's policy concerning the implementation of dissolved water quality criteria.

EPA did not calculate a per household cost as part of the CTR analysis. By dividing the POTW portion of the revised high-end cost estimate (\$41.6 million) by the State's current estimated number of households in California (11.1 million) results in an estimated cost of \$3.75 per household per year. It is unknown, however, whether all of the costs incurred by POTWs would be passed directly on to households. Nonetheless, EPA believes that \$3.75 per year is not an unreasonable rate increase to protect the waters of the State of California.

See also responses to CTR-005-001 and CTR-040-031.

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Comment ID: CTR-035-044b  
Comment Author: Tri-TAC/CASA  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01d01 Cost Estmte by Commenter  
References:  
Attachments? N  
CROSS REFERENCES E-01c01  
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Comment: pp. 42188-42189 - Potential Costs Do Not Meet the \$100 Million Threshold Under E 0. 12866 (also see discussion above) As noted on p. 42188, one component of the definition of a "significant regulatory action" is that the rule may have an annual effect on the economy of \$100 million or more. EPA states on p.42189 that "the annualized potential costs that direct and indirect dischargers may incur as a result of State implementation of permit limits based on water quality standards using today's

proposed criteria are estimated to be between \$15 million and \$87 million." We believe that this range significantly underestimates the potential costs that may be realized from the implementation of this rule. This belief is based on the numerous assumptions used by EPA that would have served to underestimate potential costs, including assumptions about regulatory flexibility that are clearly contradicted in the Preamble to the rule itself. These issues are further enumerated in Attachment 2, which contains an analysis prepared by the environmental economics firm, M. Cubed. Furthermore, we strongly believe that EPA has a duty to look at a full range of potential costs that may be incurred, and not just to look at the costs under optimistic assumptions. This duty is especially acute in light of the uncertainties of how the CTR will be implemented by the State.

We examined the potential costs for the POTW sector to determine the reasonableness of EPA's cost estimates. Our preliminary analysis indicates that for 23 major POTWs the annualized costs could reach \$400 million.(\*3) This estimate includes the cost to construct and operate end-of-pipe treatment processes where these would be necessary to achieve projected effluent limits. Unlike the EPA cost estimates, we have assumed that regulatory relief options may not be available, and that, based on the pollutants causing compliance problems, pollution prevention and treatment plant optimization might not be sufficient to reliably achieve compliance. Thus, we feel that this estimate reflects a more accurate depiction of the potential POTW "high-end" compliance costs that could result from the draft CTR. Based on this analysis, we believe that EPA should re-analyze the potential costs for POTWs to meet water quality-based effluent limits based on the criteria in the CTR.

As noted on p. ES-2 of the Economic Analysis (U.S. EPA, 1997a), EPA estimated only the costs to point sources, and did not estimate the potential costs for compliance for nonpoint source dischargers, despite the fact that the majority of water bodies in California are impaired due to nonpoint source discharges (SWRCB, 1996). In addition, EPA failed to estimate the costs of compliance for wet weather dischargers, such as municipal and industrial stormwater dischargers. These omissions also lead us to believe that the potential total costs of the rule are far greater than \$100 million. EPA must correct these deficiencies and redo the Economic Analysis.

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(\*3) Backup information for these cost estimates is available upon request.

Response to: CTR-035-044b

See responses to CTR-021-005c, CTR-032-004, CTR-004-003, CTR-040-039, and CTR-021-006b.

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Comment ID: CTR-038-003  
Comment Author: Sonoma County Water Agency  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01d01 Cost Estmte by Commenter  
References:  
Attachments? Y  
CROSS REFERENCES

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Comment: As background, the Sonoma Valley County Sanitation District (District) provides secondary

treatment of wastewater from the towns and communities of Sonoma, Glen Ellen, Boyes, Hot Springs and Aqua Caliente. These are small residential communities with supporting commercial development and only two significant industrial users, a winery and a State hospital. The plant serves a combined population of approximately 26,000, has a capacity of 3.0 million gallons per day (mgd). Between November 1 and April 30 of each year, the plant discharges effluent to the upper end of Schell Slough. During the remainder of the year the effluent is reclaimed for agricultural irrigation. Schell Slough extends approximately 5 miles downstream from the discharge before it terminates at its confluence with Second Napa Slough. Approximately 5.7 miles of waterways connects the Schell Slough system / Second Napa Slough confluence to both the Napa River and San Pablo Bay.

Under the Basin Plan dilution policy, the treatment plant discharge to Schell Slough does not receive a dilution credit, and as a result receiving water criteria are applied directly as effluent limitations in our permit. The District has conducted a dilution analysis using a model of Schell Slough and downstream waters (see attachment). The analysis found that during periods of low natural runoff, the discharge receives a 1:1 dilution about 3 miles downstream and a 10:1 dilution shortly after entering Second Napa Slough 5 miles downstream.

The District has implemented a pollution prevention program. As a result of a corrosion control program implemented by our agency, copper levels in the plant effluent have been reduced from over 40 ug/l several years ago to between 10 and 20 ug/l today. Based on studies conducted by the Novato Sanitary District, which has the same water supply and similar effluent copper levels, it can be concluded that the remaining copper levels in the Sonoma plant effluent are largely the result of corrosion of copper pipes in local households and businesses. Thus, there are no feasible pollution prevention measures that can be taken to bring about further source reduction of copper.

The District has recently conducted an effluent monitoring program to assess compliance with EPA-recommended water quality criteria, using clean sampling techniques and appropriate QA/QC. We are conscious of the difficulty of analyzing for certain constituents and have taken precautions to ensure that we get accurate results. For example, in the case of mercury, we are using ultra clean sampling techniques and sending our samples to Frontier GeoScience, the recognized national expert in mercury analysis. This sampling program has identified several significant attainability problems with respect to the proposed CTR criteria.

3. The proposed rule could cost the District approximately \$7 million per year without providing commensurate environmental benefits. The current Basin Plan for San Francisco Bay does not allow dilution for shallow water dischargers. A review of the Draft Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, September 12, 1997, indicates that the draft policy would allow the current Basin Plan dilution policy to continue. Under the zero dilution policy and other historic permitting practices of the San Francisco Bay Regional Board (e.g., the Board has not considered translators in establishing permit limits), the District would be unable to comply with the proposed aquatic life criteria for copper (CMC and CCC) and the proposed human health criteria for mercury, alpha-BHC, gamma-BHC (lindane) and bromodichloro-methane (see Table 1). Based on constituents detected in 1 or 2 of the 6 samples, one PAH (indeno (1,2,3-cd)pyrene) and several pesticides (chlordan, 4,4'-DDT, and endrin) may also present attainability problems (see Table 2). To achieve the CTR criteria for these constituents would require reductions of greater than 80% for copper and reductions of between 49% and 75% for mercury, and between 83% and 98% for alpha-BHC and gamma BHC. Such reductions would require tertiary lime precipitation and reverse osmosis for mercury and copper and carbon adsorption for the organics. The costs of these facilities for a 3.0 mgd plant would be on the order of \$7 million per year (\$5 million per year for lime precipitation and reverse osmosis and \$2 million per year for carbon adsorption)(see Table 4).(\*1) This compares to the present

District budget for all functions of approximately \$5 million per year. These costs would have no measurable benefit on San Francisco Bay proper because the District's discharge constitutes such a small portion (less than 1%) of the municipal discharge to the Bay and according to the EPA economic analysis, point source discharges contribute only 1% to 11% of the total toxic loading to the Bay. Thus, the District contributes between 0.01% and 0.1% of the toxic pollutant load to the Bay. The sole benefit of the costly end-of-pipe facilities necessary to achieve compliance with the CTR criteria would be to achieve the criteria in Schell Slough, before it enters Second Napa Slough. The District is willing to pursue source control and other reasonable measures to reduce the discharge of these constituents, but the costs necessary to achieve the proposed CTR criteria in-stream do not appear commensurate with the benefits. Although the District has not calculated the cost per toxic pound equivalent that would be removed by such facilities, the cost would likely exceed by an order of magnitude the \$200 - \$500 cost triggers for regulatory relief, which EPA used in its economic analysis.

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(\*1) The District's current permit contains a number of effluent limits based on the old State Plans. However, those effluent limits are not legally enforceable in that they were based on water quality plans that were determined by the court to be illegal. For that reason, it would be inappropriate for EPA to assume that adoption of criteria similar to those in the old State Plans would have no effect on the District.

Response to: CTR-038-003

The Sonoma Valley County Sanitation District (District) stated that the CTR could cost the District approximately \$7 million per year without providing commensurate environmental benefits. This estimate is based on the assumption that projected CTR-based permit limits would be derived using historic Regional Board permitting practices, which do not provide dilution and do not use metal translators to derive permit limits. The District estimated that tertiary lime precipitation and reverse osmosis would be required for mercury and copper, and that carbon adsorption would be required for organic constituents such as alpha-BHC, gamma-BHC (lindane), bromodichloromethane, indeno (1,2,3-cd)pyrene, chlordane, 4,4'-DDT, and endrin.

The documentation the District provided, however, is not sufficient for EPA to determine whether the District's estimate is consistent with EPA's estimates for sample facilities of the same industrial category and flow range. In particular, the District would need to provide facility engineering data, existing permit limits, and effluent data for the pollutants of concern. The documentation submitted by the District provides only maximum effluent concentrations. EPA is aware, for example, that other dischargers to San Francisco Bay tributaries (e.g., Novato District) have been assigned copper and mercury NPDES limits that are more stringent than projected CTR-based effluent limits (see response to CTR-005-001). When existing effluent limits are as stringent or more stringent than projected CTR-based limits, no costs are attributed to the CTR because the State has the authority under the Clean Water Act to implement water quality standards in a more stringent manner than is required under federal regulations and guidance.

EPA also noted that the District's analysis was based on effluent data that were reported between November 1996 and April 1997 (6 months) and comprise only six observations per pollutant. These effluent data are limited and may not reflect typical discharge conditions. A drought during a particular year, for example, may induce people to use more pesticides; thus impacting effluent quality. Such may be the case in the use of alpha-BHC and gamma-BHC (lindane) which were detected in the effluent at concentrations greater than the projected CTR-based limits. Estimates based on effluent data collected over three consecutive years would be more appropriate in establishing the most effective compliance

strategy. Despite the limited information submitted with the District's comment, EPA believes that the District's estimate is based on implementation assumptions that are different from EPA's assumptions which follow the Technical Support Document for Water Quality-based Toxics Control (EPA, 1991). If the District is analyzed using EPA's methodology and implementation procedures, the facility's potential compliance costs will most likely be insignificant.

With respect to the District's comment that it is not feasible to implement pollution prevention measures for further source reduction of copper, EPA acknowledges that source reduction alternatives may, indeed, not be feasible for all dischargers and pollutants. In the case of copper, for example, the information submitted by the District suggests that its most cost-effective compliance strategy would be to develop a site-specific metal translator and a water-effect ratio. According to the CTR, these two implementation options are acceptable and would not result in significant costs. However, significant costs that result from nonstandard implementation practices should not be attributed to the CTR as is done in the District's analysis.

EPA disagrees with the District's assumption that tertiary lime precipitation and reverse osmosis would be necessary for mercury compliance. The District indicated that the facility receives discharges from a State hospital. EPA has information on mercury levels from hospitals, clinical laboratories, and medical waste incinerators which indicates that hospital facilities discharge mercury at levels up to 15 ppb (EPA compiled two documents which are available in the record for this rule: Overview of Pollution Prevention Approaches at POTWs and Pollution Prevention at POTWs, Resources List). There are some potential other sources which could also be addressed with pollution prevention programs to assure a facility would be in compliance with projected CTR-based limits. Based on EPA's costing methodology, pollution prevention is assumed sufficient for compliance when a pollutant is reported below method detection levels and the projected effluent limit is below method detection levels.

The District also indicated that four organic constituents, indeno(1,2,3-cd)pyrene, chlordane, 4,4'-DDT, and endrin were detected in one or two samples at concentrations greater than projected CTR-based limits. Based on EPA's costing methodology, one or two exceeding values out of six total observations would not be conclusive enough to assume treatment costs. Because the available data is not sufficient to justify addition of treatment, and because the District does not indicate having pursued any source reduction efforts for organic constituents (i.e., no information is provided in the comment), EPA estimates that pollution prevention would be a reasonable pollution control strategy for organic constituents. Examples of the successes of POTWs awareness and education campaigns regarding the use and discharge of products containing toxic substances are presented in EPA's Overview of Pollution Prevention Approaches at POTWs and Pollution Prevention at POTWs Resource List, which are available in the record for this rulemaking.

EPA also noted that the District's \$7 million annual cost estimate was based on capital costs that are considerably higher than those estimated by EPA. EPA's costs are based on those found in the Treatability Manual Volume IV, Cost Estimating (U.S. EPA, 1980) and adjusted to current dollars using an Engineering News Record index of 1.9. The District indicated that the total capital costs for a reverse osmosis and chemical precipitation system would be \$18.9 million compared to EPA's estimate of \$5.7 million. EPA believes that its capital cost estimates are reasonable.

Finally, EPA disagrees with the District's statement that compliance costs for point source dischargers will not have measurable benefits on San Francisco Bay because of the relatively small toxic load contribution compared with nonpoint sources. EPA believes that controls on point source dischargers will contribute to attaining standards in the water body. As controls on nonpoint sources are also implemented, the water quality standards can be achieved. However, should the State determine through

a total maximum daily load (TMDL) allocation that controls on nonpoint sources are a more cost-effective approach to achieving standards, the State can redistribute the allocations through the TMDL process. Also note that it is the toxicity of the discharge that is important. That is, even a small discharge can result in increased risks, sediment contamination, and toxics loading.

See also responses to CTR-032-004, CTR-056-018, CTR-045-012b, CTR-040-026, and CTR-040-031.

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Comment ID: CTR-041-009

Comment Author: Sacramento Reg Cnty Sanit Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01d01 Cost Estmte by Commenter

References:

Attachments? N

CROSS REFERENCES

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Comment: 4. Critique of SRCSD Case Study

General

The findings of the Sacramento case study are summarized in Appendix I-C.

The summary analysis flags three pollutants: mercury, aldrin and alpha-BHC as having a reasonable potential to exceed projected CTR-based WQBELs. Projections are then performed to determine a compliance cost related to achieving reductions necessary to comply with the CTR - based limits. This is accomplished by establishing a pound-equivalent reduction needed for each pollutant and relating this to estimated costs (taken from the " . . . Great Lakes Water Quality Guidance (April, 1993)). From this a cost-effectiveness ratio is established. For Sacramento, the data used results in a fairly low (favorable) cost-effectiveness (\$1.30/annual toxic load equivalent).

A review of the Sacramento case revealed significant problems with the data and assumptions used to derive the cost-effectiveness ratio. These have resulted in a gross underestimate of the ratio and bring to question the validity of the entire analysis. The main problems were use of questionable data without qualification and unsubstantiated assumptions in the cost to achieve compliance. The following details the concerns specific to each pollutant identified.

Mercury

In the analysis a pound-equivalent for mercury was determined using the following:

Regional Plant design flow of 181 mgd. Maximum single effluent mercury concentration of 0.360 ppb.  
Toxic Weight factor of 500

The total mercury discharge loading is then calculated by applying the design flow of the Regional Treatment Plant and the maximum effluent mercury concentration. It is further assumed this maximum value occurs on a daily basis resulting in a calculated 198 pounds mercury per year (or 99,177 pound

equivalents). This method severely overstates the amount of mercury potentially discharged or even existing in the system. A more appropriate method would be to use the mean concentration to calculate toxic-pound equivalence. Further, the 0.360 ppb value has previously been identified as an outlier.

#### Aldrin and Alpha BHC

The use of either of these compounds in the analysis is questionable based on a qualified review of the data.

The compound alpha-BHC has never been detected in all effluent testing performed. Due to the use of different analytical laboratories over the years, the laboratory detection level has varied. However, through 1996 only 1 case out of 41 samples had a detection level above the listed CTR-based limit. It was this one case that was used to perform the pound-equivalent evaluation and cost analysis for reduction for the Sacramento case study. However, based on sampling it is doubtful as to whether this pollutant is present in the plant wastestreams, since the results of testing using low-level detection limits has demonstrated nondetects significantly below the CTR-based limit. A similar case is made for Aldrin which has been detected only once in the effluent in all testing performed.

The case study applied the highest detection levels for each compound to determine the pound-equivalent reduction necessary to achieve compliance. Once again this grossly overestimates the amount of pollutants in the system. Further, it is stated in the case study that these compounds will be controlled through pollution prevention/waste minimization and a cost of \$400,000 assigned for both pollutants. The overstated pound-equivalent coupled with the unsubstantiated cost for control yields a relatively low cost-effectiveness ratio. However, it should be noted that both these compounds have been banned for at least a decade and therefore do not lend themselves to the techniques of pollution prevention since there is no identified point source.

Response to: CTR-041-009

See response to CTR-004-003.

EPA calculated pollutant loading reductions for each facility by calculating the difference between the baseline effluent concentration and the projected CTR-based effluent limitation. The approach for calculating the load reductions, therefore, varied depending on the costing scenarios.

For the low scenario, the following assumptions were used: No reduction was assumed if the difference between the baseline value and the CTR limitation was negative. If the existing effluent concentration was above the MDL but the CTR-based limit was below the MDL, the CTR-based limit, or one-half of the MDL (whichever produces a smaller load reduction) was used for the CTR-based effluent limitation. If the maximum reported effluent concentration exceeded the existing permit limit, high scenario assumptions were employed.

For the high scenario, the following assumptions were used: If all effluent data for a pollutant were reported below detection levels, the method detection level (MDL) was used as the maximum observed concentration. If the maximum observed concentration was below the CTR-based limitation, no loading reductions were considered. If the difference between the baseline value (existing permit limit or effluent concentration) and the CTR limitation was negative, zero reduction was assumed. If both the CTR-based WQBEL and the existing permit limit were below the analytical MDL, one-half of the difference between the existing permit limit and the CTR-based limit was used to estimate the pollutant load reduction. If the existing permit limit (or effluent concentration in the absence of a permit limit)

was above the MDL, but the CTR limit was below the MDL, the CTR-based limit, or one-half of the MDL (whichever produced a smaller load reduction) was used for calculating pollutant load reductions.

To determine the reduction in loadings, EPA converted the difference between the most stringent existing permit limit (or the maximum reported effluent concentration) and the most stringent CTR-based effluent limit (concentration) to pounds per year by multiplying this difference by the facility's average daily flow rate (design flow rate for municipal dischargers). EPA calculated annual pollutant loading reductions for each of the pollutants analyzed at each sample facility for which costs were estimated. The average load reduction then was calculated across sample facilities within each discharge category and extrapolated to the universe of facilities by multiplying the average load reduction by the total number of facilities in the category (EPA extrapolated facility specific costs similarly).

As indicated above, where pollutant monitoring data indicate detectable quantities of a pollutant, EPA used maximum effluent concentrations to estimate both pollutant loading and potential costs. Under this scenario, the methodology may result in overstating pollutant loadings and benefits. However, the assumption will also overstate compliance costs to reduce pollutant discharge concentrations. EPA chooses to err on the side of overstating costs to ensure that all potential costs are counted. EPA disagrees with the commenter's opinion that pollution prevention is not an appropriate treatment for these pollutants merely because they have been banned for some time. Lingering stockpiles or residential use of banned substances may still be releasing these pollutants into the environment and an aggressive pollution prevention program including source controls and public education should be successful in controlling these substances.

One exception, however, occurs under the low scenario. Where the Agency assumed that a facility would pursue regulatory relief, rather than end-of-pipe treatment, no load reduction is credited to the facility, while a nominal cost is incurred to pursue the regulatory relief. In other words, costs increase with no concurrent benefits.

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Comment ID: CTR-044-004  
Comment Author: City of Woodland  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01d01 Cost Estimate by Commenter  
References:  
Attachments? Y  
**CROSS REFERENCES**

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Comment: As background, the City of Woodland is a small community with a population of 43,250. We operate a 6.0 million gallon per day (mgd) secondary treatment plant which discharges to Tule Canal, a constructed agricultural drain located within the Yolo Bypass. Tule Canal is an effluent dependent water body. Except for periods when the Sacramento River overflows into the bypass, Tule Canal flows are dependent upon agricultural drainage and the plant effluent. During most of the year, canal flows are dominated by agricultural drainage.

In 1994, the City conducted an effluent and receiving water quality assessment. The purpose of the assessment was to characterize toxic pollutant levels in the plant effluent and the receiving water,

determine effluent dilution, and assess whether the discharge, had a reasonable potential to cause or contribute to an exceedance of either existing or potential water quality objectives for toxic pollutants. The toxic pollutant sampling was conducted using clean sampling techniques and proper QA/QC. In 1996, a supplementary sampling monitoring program was conducted to gather additional data on several of the toxic pollutants of concern. Based on the combined results of the 1994 and 1996 monitoring programs, the City concluded that there may be a reasonable potential for exceedance of several existing and potential toxic pollutant objectives (including aldrin). In that same year, the City developed a water quality compliance strategy to address the problematic toxic pollutants (see Exhibit A).

We have reviewed the proposed CTR and offer the following comments:

3. The proposed rule could cost the City approximately \$1.3 million annually without providing commensurate environmental benefits. The Regional Board does not allow the City a dilution credit and therefore we would have to achieve the aldrin criteria (and possibly other criteria) in our undiluted effluent. This would require that maximum observed aldrin levels (0.01 ug/l) be reduced by 98.6% (to 0.00014 ug/l). A reduction of this magnitude is not feasible through pollution prevention because only 4% of the aldrin has been identified as coming from industrial sources. Residential sources account for 55% and other unidentified sources account for 41 % (see Exhibit C). The least costly alternative for achieving an effluent limitation based on the aldrin criteria would be to remove the discharge from Tule Canal and construct a 7-mile outfall to the Sacramento River (where significant dilution exists). This would have a total present worth cost of \$9.4 million (see Exhibit A, Tables 5 and 6). This would translate to an annual cost of \$1.3 million per year (at 7% over 10 years) and would require about a 50% increase in monthly sewer service charges. This substantial cost would not produce measurable benefit on Tule Canal in that the canal is dominated by agricultural drainage, which contains pesticides and other toxic pollutants. For example, Tule Canal mercury levels upstream of the plant discharge have been measured at levels of 0.15 ug/l, three times the proposed CTR criterion for mercury (see Exhibit A, page 5). Irrespective of this, the City has developed a source control strategy for aldrin and other pollutants of concern (see Exhibit D). A major element of the strategy is the implementation of a pesticides outreach program, now underway (see Exhibit E).

Response to: CTR-044-004

EPA disagrees with the City of Woodland that a \$9.4 million construction project would be required to ensure compliance with the CTR-based limit for aldrin because pollution prevention cannot feasibly ensure compliance with the CTR-based limit. The City of Woodland's own analysis of aldrin effluent monitoring data (Larry Walker Associates, WPCF Water Quality Compliance Strategy, Task 14.4, November 1996) states that "significant uncertainty exists as to the actual amounts present." Aldrin was detected above the detection level of 0.006 ug/L only twice out of 13 data points (0.0063 ug/L and 0.01 ug/L). Since sampling data for aldrin are limited and generally reflect that aldrin is not detected, EPA would assign pollution prevention to ensure that aldrin levels remain below detection levels and in compliance with the CTR-based limit. Woodland's current pollution prevention program involves education and outreach, methods which can be successful in reducing residential and miscellaneous inputs of aldrin to the system. However, if Woodland's public education and outreach program does not produce the desired result, Woodland may need to better identify miscellaneous sources (41% of aldrin sources based on the Larry Walker report) for source control or other pollution prevention measures in order to control aldrin levels.

See responses to CTR-056-018 and CTR-021-008.

EPA acknowledges that it was unable to monetize all categories of potential benefits from the rule. EPA

provided a qualitative description of the expected benefits and those unmonetized benefits that may contribute most substantially to total benefits in the final Economic Analysis of the CTR.

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Comment ID: CTR-052-005b

Comment Author: East Bay Dischargers Authority

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01d01 Cost Estmt by Commenter

References: Letter CTR-052 incorporates by reference letters CTR-035 and CTR-054

Attachments? Y

CROSS REFERENCES E-01i

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Comment: EPA has greatly understated the potential attainability problems associated with the CTR. This also includes numerous erroneous assumptions made in the EA, such as those described by BADA, CASA/Tri-TAC, and M.Cubed. Larry Walker Associates prepared an Attainability Analysis for the BADA agencies, copy attached. That analysis concluded that BADA agencies will not be able to comply with effluent standards for copper, nickel, pesticides (Aldrin and Heptachlor), and PAHs [Benzo(a)Pyrene, Dibenzo(a,h)Anthracene, and Indeno(1,2,3-cd)Pyrene]. Removals ranging from approximately 20% to nearly 90% will be required. Without major revisions to the CTR, the cost for compliance will be more than \$130,000,000 annually. These costs represent only the BADA agencies. Actual costs for all POTW dischargers to San Francisco Bay would be at least an additional 40%, bringing the total annual cost for San Francisco Bay ratepayers to more than \$185,000,000 on a strictly flow proportional basis. Since the non-BADA POTWs are significantly smaller, capital costs would actually increase due to loss of economy of scale. Therefore, actual costs for San Francisco Bay could easily exceed \$200,000,000 per year - all for the sole purpose of removing between 1-10% of the "Estimated Share of Toxic Loadings Attributable to Point Source."(\*1)

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(\*1) United States Environmental Protection Agency, Office of Water 4301, EPA-820-B-96-001, July 1997, Economic Analysis of the Proposed California Water Quality Toxics Rule, Executive Summary, Page ES-10, Exhibit ES-3. Estimated Share of Toxic Loadings to California Surface Waters Attributable to Point Sources.

Response to: CTR-052-005b

See responses to CTR-040-039 and CTR-052-005a.

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Comment ID: CTR-052-010

Comment Author: East Bay Dischargers Authority

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01d01 Cost Estmt by Commenter

References: Letter CTR-052 incorporates by reference letters CTR-035 and CTR-054

Attachments? Y

#### CROSS REFERENCES

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Comment: Cost Estimates for East Bay Dischargers Authority Compliance with the CTR

The following table summarizes the costs for compliance with the CTR. The costs are based on data and methodology used in the EA.

Pollutant (\$M)	Remedy (\$M)	Capital Cost (\$M)	Annual O&M -----	Annualized Costs -----	(\$M)
pollution	NA	NA	0.057	prevention	copper
organics	carbon	116.4	19.4	44.2	adsorption
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TOTAL		116.4	19.4	44.26	

Response to: CTR-052-010

See responses to CTR-032-004 and CTR-060-019.

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Comment ID: CTR-054-005

Comment Author: Bay Area Dischargers Assoc.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01d01 Cost Estmte by Commenter

References:

Attachments? Y

#### CROSS REFERENCES

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Comment: The proposed CTR contains several criteria that could result in annual costs for BADA agencies alone of between \$68 million and \$134 million per year. BADA has conducted an attainability analysis based on effluent data collected by BADA agencies over the past several years, ambient data collect as a part of the Regional Monitoring Program, and the current Basin Plan dilution policies. Both the effluent and ambient data were collected using clean sampling techniques and analyzed using proper QA/QC procedures. An initial review of the State Implementation Policy indicates that the policy would not result in any loosening of the current Basin Plan dilution policy and, in fact, could result in a more restrictive policy.(\*1) BADA's attainability analysis also assumed that an additional 10% reduction in problematic pollutants could be achieved through pollution prevention. The CTR economic analysis assumed a 10% to 25% reduction through pollution prevention, but BADA agencies have been implementing pollution prevention for years and would not expect significant additional reductions beyond those already achieved. All BADA agencies have extensive public education and pollution prevention programs and several have won national awards for their source control programs. BADA's analysis assumed that the Regional Board would accept and utilize metals translators developed in

accordance with EPA procedures. BADA used the RMP ambient data to develop the metals translators. BADA's analysis assumed lime precipitation would be utilized where metals removal was necessary and carbon absorption would be utilized where organics removal was necessary. BADA evaluated two lime precipitation scenarios, the addition of lime to primary tanks as EPA assumed in its economic analysis and tertiary lime treatment. BADA evaluated the cost of tertiary lime treatment because we believe EPA's assumption regarding the efficacy and cost of primary lime addition to be overly optimistic. BADA does not believe it is possible to achieve the low effluent values required to comply with the copper criteria through addition of lime to the primaries. Further, BADA believes EPA was incorrect in assuming that lime could be added to primaries without significant capital cost. Adding lime to primaries, at a minimum, would greatly increase the amount of sludge produced, thereby necessitating additional sludge handling and processing facilities. For these reasons, consultants have generally recommended tertiary lime treatment to achieve the effluent copper levels required to achieve the proposed criteria. Finally, BADA's analysis used 1996 costs, amortized at 7% interest over ten years, just as EPA did in its analysis. In estimating the cost of lime addition to the primaries, BADA used EPA's costs for lime treatment. The results of BADA's attainability analysis are presented in Attachment 2. The analysis shows that after pollution prevention all five BADA agencies would have problems complying with one or more of the proposed criteria. Three agencies would have problems with dissolved copper criteria for protection of aquatic life and two agencies would have problems with carcinogen criteria for protection of human health (aldrin, PAHs, or heptachlor). The estimated annual cost to achieve compliance varies between \$68 million and \$134 million per year depending on the assumption regarding lime treatment. The lower cost was based on EPA's assumption that lime could be added to the primaries to achieve the effluent limits without any capital cost. The higher cost was based on the assumption that tertiary lime treatment would be necessary to achieve the effluent limits. The lower costs include \$12 million per year for lime treatment to achieve the copper effluent limitations and \$56 million per year for carbon absorption treatment to achieve the effluent limitations based on carcinogens. The higher costs include \$78 million per year for lime treatment and \$56 million per year for carbon absorption treatment. Again, this is not a worst case scenario in that BADA assumed translators would be allowed (even though the Regional Board has not made it a practice to accept translators) and assumed continuation of the present dilution policy (even though the Draft State Implementation Policy would allow the Regional Board to deny dilution credits for deepwater dischargers).

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(\*1) For example, on page 13, the Draft Implementation Policy states: "The RWQCB shall consider denying or significantly limiting a mixing zone and dilution credit if the discharge contains pollutants that are carcinogenic, mutagenic, teratogenic, persistent, bioaccumulative, or attractive to aquatic organisms." Literally all POTW discharges contain pollutants such as mercury that are bioaccumulative and materials such as chloroform that are carcinogenic. Thus, the Draft Implementation Policy would allow the San Francisco Bay Regional Board to eliminate the 10: 1 dilution credit currently afforded to deep water dischargers.

Response to: CTR-054-005

EPA disagrees with BADA's cost estimates. EPA estimated costs to POTWs for the entire state of from \$7.8 million to \$41.6 million annually compared to BADA's estimate of \$68 million to \$134 million annually. As BADA points out in its comment, EPA uses a different standard when assigning pollution prevention costs (see response to CTR-004-003 for a discussion of EPA's methodology for applying pollution prevention costs). EPA's analysis assumes that facilities will try to meet CTR-based limits using the least cost option and, for loading reductions between 10% and 25%, EPA believes that pollution prevention or process optimization are the more likely options over end-of-pipe treatment.

In EPA's economic analysis for the final CTR, it assigned both lime addition to primary tanks and tertiary lime treatment based on individual facilities' existing treatment, CTR-based limits, and required loading reductions (see the response to CTR-040-032). EPA did consider sludge disposal where relevant and estimated residuals removal costs for those facilities.

The differences in load reductions (and thus the treatments considered necessary to meet CTR-based limits) between BADA and EPA's analyses result from different baselines in the two analyses. BADA uses a 99.9% probability estimate for metals and the maximum observed concentration for organics as its baseline to estimate loading reductions. EPA uses the existing NPDES permit limit or, in the absence of an existing limit, the maximum effluent concentration to estimate loading reductions which are then considered when assigning costs to reach the necessary load reductions.

EPA did not assign costs mechanically based on unrealistic guidelines and statistical procedures to predict worst-case effluent quality as a means for determining compliance as was done in the BADA analysis. EPA's cost decision matrix allowed for the consideration of the available data in the context of detection limits, facility processes, and potential irregularities in plant operations which might result in abnormally high data. EPA believes that its methodology is more accurate in its evaluation of data and its estimation of costs than the BADA methodology.

See also responses to CTR-054-013a, CTR-021-008, CTR-040-029a, CTR-056-018, and CTR-040-031.

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Comment ID: CTR-056-020

Comment Author: East Bay Municipal Util. Dist.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/22/97

Subject Matter Code: E-01d01 Cost Estmte by Commenter

References: Letter CTR-056 incorporates by reference letter CTR-054

Attachments? N

**CROSS REFERENCES**

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Comment: Given the limited time available to respond to the proposed CTR, an attainability assessment for one pollutant, copper, as the primary pollutant of concern for EBMUD was conducted (it should be noted that the District also has concerns over organic pollutants where detection limits are greater than the proposed criteria). The analysis was conducted and is presented as percentage reductions necessary to reach three levels of probability for achieving 4-day average limits:

\* 95% Probability would require a 0 to 7% copper reduction. The District believes that such reductions could be achieved within 0 to 5 years by continued focus on pollution prevention measures. Current costs for pretreatment are approximately \$570,000/year, and the cost of pollution prevention approximately \$546,000/year.

\* 99% and 99.9% Probability would require up to a 19% and 30% reduction respectively; this could only be attained through advanced treatment facilities beyond that which presently exists.

Since 1974, influent copper loadings have been reduced from 318 kg/day to 17 kg/day in 1996 (i.e.

94.7%). Pollution Prevention efforts since 1988 have resulted in a 39% reduction from 28 kg/day to 17 kg/day. In 1996 wastewater treatment resulted in a further reduction to an average effluent discharge of 5.2 kg/day. To reduce the discharge of copper by an additional 30% from 5.2 kg/day to 3.64 kg/day would result in a capital cost of \$42 million and an annual O&M cost of \$5 million per year. This is based on the assumption of having to treat approximately 30% of the plant flow (i.e. 22 MGD) to remove copper using the lime precipitation process. This estimate compares closely with an independent estimate of \$39.2 million capital cost and \$4.6 million per year operating cost performed at EBMUD's request by the consulting firm of Larry Walker & Associates.

If the EBMUD information is an example, there can be no doubt that the \$15 to \$87 million per year EPA cost estimate, which is supposed to have included debt service on capital investments, is a gross understatement of the true costs statewide.

Response to: CTR-056-020

See response to CTR-004-003.

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Comment ID: CTR-059-001

Comment Author: Los Angeles County Sanit. Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01d01 Cost Estmte by Commenter

References: Letter CTR-059 incorporates by reference letter CTR-035

Attachments? Y

CROSS REFERENCES

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Comment: Historical monitoring data for the seven water WRPs have shown that plant effluent concentrations will not reliably meet the proposed CTR criteria for mercury, lindane and four trihalomethanes (bromoform, chlorodibromomethane, chloroform and dichlorobromomethane). Our preliminary evaluation of the feasibility of employing source control or pollution prevention as the principal compliance strategy indicates that these options are likely to yield only very small reductions in loadings for these pollutants. Thus, to ensure reliable compliance with the CTR, reverse osmosis (RO) at the Sanitation Districts' seven WRPs would be necessary. The preliminary cost estimate for providing RO at each of the seven WRPs is significant. The total annualized cost is approximately \$148 million. To put this into perspective, the addition of RO treatment would double or triple the single family home sewer system rates for the areas serviced by these facilities.

Response to: CTR-059-001

EPA is not able to evaluate LACSD's assessment that reverse osmosis (RO) is required at each of the WRPs which are not in compliance with the CTR-based limits because LACSD does not provide monitoring data or any other details with which EPA can perform an analysis. Thus, EPA disagrees with LACSD's \$148 million cost estimate for the WRPs. EPA estimates that costs to POTWs for the entire state will range from \$7.8 million to \$41.6 million. See responses to CTR-045-012b, CTR-004-003, and CTR-005-004.

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Comment ID: CTR-067-006b  
Comment Author: Ojai Valley Sanitary District  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01d01 Cost Estmte by Commenter  
References:  
Attachments? N  
CROSS REFERENCES R

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Comment: \* The EPA should reevaluate their determination under the Regulatory Flexibility Act that the rule will not have a significant economic impact on a substantial number of small entities. OVSD would be classified as a small entity, serving a population of 25,000, and would be significantly affected by the CTR. OVSD would have to further treat our effluent with reverse osmosis in order to comply with proposed CTR criteria, specifically for copper, nickel, zinc, lindane, and trihalomethanes; modifications to the existing plant would result in estimated increased annualized costs of \$1.98 million. These costs are significantly higher than EPA's estimated costs per plant of \$27,000 to \$480,000 per year. In addition, EPA must consider that OVSD's contingent of small businesses potentially will be affected by the proposed rule through increased regulation of their discharges, increased sewer discharge fees, or product bans. Thus we strongly believe that the EPA's Economic Analysis significantly underestimates the potential statewide costs associated with adoption of the CTR and should be revised.

Response to: CTR-067-006b

See responses to CTR-021-005c, CTR-056-018, and CTR-045-012b.

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Comment ID: CTR-070-002b  
Comment Author: Sewerage Agency of Sthrn Marin  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/22/97  
Subject Matter Code: E-01d01 Cost Estmte by Commenter  
References:  
Attachments? Y  
CROSS REFERENCES E-01w

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Comment: Economic analysis The attached table shows that implementation of the proposed limits will result in the reduction of SASM's copper limit from 37 ug/l to 12 ug/l. It is expected that reverse osmosis will be the most economical method to reach this level and that the cost of this operation will be approximately \$550,000 per year. This equates to a 30% increase in SASM's budget. This cost is also higher than EPA's estimated costs of \$27,000 to \$480,000 per plant per year. It appears that the Economic Analysis underestimates the potential statewide cost and should be revised.

Response to: CTR-070-002b

See responses to CTR-045-012b and CTR-070-002a.

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Comment ID: CTR-111-001

Comment Author: City of Los Angeles

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 02/19/98

Subject Matter Code: E-01d01 Cost Estmte by Commenter

References:

Attachments? Y

CROSS REFERENCES

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Comment: As discussed in the February 12, 1998 telephone conversation between Mr. Mitchell of your office and William Straub of my staff, enclosed for your information and use is a copy of an April 1992 report summarizing anticipated compliance efforts and costs that the City compiled in response to the State Water Resources Control Board's 1991 adoption of the Inland Surface Waters (ISWP). Although the compliance costs were estimated specifically for our DC Tillman Water Reclamation plant in Van Nuys, we believe that per-MGD unit costs are valid for our Los Angeles-Glendale Water Reclamation Plant as well (the estimated costs are summarized on Pages 11 and 12 of the report's Executive Summary).

As indicated in our oral and written comments (September 18, 1997 public hearing and September 26, 1997 letter), the proposed California Toxics Rule's July 1997 Economic Analysis (EA), based in part on the Tillman facility as a case study, misrepresented the true compliance cost impact to the City. The EA, in effect, compared the proposed criteria to the waste discharge requirements of the Tillman plant's existing NPDES permit and concluded that the cost impact would be minimal. However, the plant's 1991 permit was based on the ISWP, which itself anticipated the criteria contained in the proposed Rule. The Tillman plant was the only POTW in the region to be repermited using these criteria; because of mounting POTW discontent following ISWP adoption, (which ultimately led to the invalidation of the ISWP in 1994), all other POTW permits were renewed using Basin Plan objectives, PQLs and National Toxics Rule criteria. The 1991 Tillman NPDES permit renewal resulted in immediate compliance problems for the plant, and for this reason we believe that the EA cost figures should consider the cost impacts of the proposed Rule from a pre-1991 point of view. The enclosed report approaches these costs from that perspective.

Updated cost estimates for the City's Tillman and Los Angeles-Glendale reclamation plants were recently prepared by the Bureau's Industrial Waste Management Division in response to the release of the proposed Rule. These include:

- \* Process optimization. Operational modifications to the Tillman and Los Angeles-Glendale plants necessitated by the proposed Rule involve capital costs in the range of millions of dollars and annual O&M costs between \$50,000 to \$200,000 per plant.

- \* Pollution Prevention/Waste Optimization. Based on past outreach programs and pollution prevention studies, the proposed Rule would cost about \$500,000. In view of the present industrial discharger compliance rate (better than 95%), this effort might have only a marginal beneficial impact.

\* Pretreatment Program. Based on studies conducted in the early 1990's, the cost of each pollutant requiring local limits development is about \$15,000. Tables I and 2 (attached) summarize constituents which would be problematic under the proposed Rule. The cost of new local limits development for these pollutants would exceed \$250,000.

The EA also did not include actual costs incurred by the City resulting from compliance studies required by the Los Angeles Regional Water Quality Control Board. These included:

\* A numerical chronic toxicity limitation that resulted in 5 years of toxicity testing costing in excess of \$200,000 (other POTWs in the area were granted narrative toxicity limits);

\* Industrial source-controllability studies costing \$110,000 for methylene chloride, lindane and other pesticides that were determined to be of domestic origin and therefore not controllable by the plant;

\* Numerous and ongoing efforts on the part of the Bureau of Sanitation to obtain relief from the Los Angeles Regional Water Quality Control Board based on plant performance data demonstrating that ISWP-based limits were neither equitable nor achievable. We would greatly appreciate your consideration of these costs and the estimated costs contained in the enclosed report with respect to EA revision. If you should have any questions, or wish to discuss actual compliance costs incurred since 1991 in greater detail, please contact William Straub at (213) 485-1820.

Response to: CTR-111-001

See response to CTR-040-026.

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Comment ID: CTRH-001-044

Comment Author: Charles Batts

Document Type: Public Hearing

State of Origin: CA

Represented Org: Bay Area Dischargers Assc

Document Date: 09/17/97

Subject Matter Code: E-01d01 Cost Estmte by Commenter

References:

Attachments? N

CROSS REFERENCES

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Comment: I don't want to go into what's presented in writing, but as a discharger, our first evaluative criteria of this rule was attainability.

Our analysis is based on the information from our member agencies, and it indicates that the ability of publicly owned treatment works to meet all the criteria is seriously questionable.

For the record, all the dischargers in BADA have extensive public education programs. We have pollution prevention programs. We have award-winning source control programs.

We base our analysis on using actual data that we filed with NPDES permits over the last two years and current regulatory criteria. All the agencies would have attainability problems.

Three agencies would have problems with dissolved copper, three agencies with the organic/carcinogenic compounds. And in fact, we believe as the detection limit approaches permit limits, that all agencies would violate the carcinogenic requirement.

At present, there is no data on these constituents in the environment, in the receiving waters, or in our influents. Most of the data is nondetectable, because of the limits of detection.

It assumes that pollution prevention can identify and control these organic compounds at below parts per trillion. That is highly speculative.

Despite the assumption made in the plan of regulatory relief, treatment has been the method used to remove pollutants from our waste water effluent. If the agencies have to remove copper by relying on lime precipitation, using EPA's own numbers which contain no capital cost for handling the solid material and sludge generated, which is no minor problem, would require considerable capital cost. It would cost our agencies on a yearly basis \$12 million.

To remove the organics that is required, it would require probably using technology like powdered activated carbon, and based on EPA estimates for this process, the cost to those agencies, just the three, would be \$56 million a year.

We believe that other of our agencies would probably be added as detection limits and the reporting limits are lowered, since MLs would offer only temporary relief, until the detection limits show that these organics are pervasive in the environment.

So just this attainability cost -- based on data of the last two years for five agencies serving three and a half million people in the Bay Area, the cost is \$68 million a year. That approaches the maximum cost projected for the state.

If we look at the projected benefits of the increased treatment and cost to our taxpayers, with point dischargers being less than 10 percent of the loading, and the lack of looking at the benefits analysis, we tend to lead people to believe that waters would meet these criteria based on just control of point sources. Actual or passive, one has to wonder what the benefits really are to the public.

If BADA agencies increase treatment to remove copper, for example, an additional 2,400 pounds of copper would be removed per year. That's about a 1 percent benefit to San Francisco. Since there is no data on carcinogenics we are talking about parts per trillion here -- the benefits become even more specious.

This analysis has not factored in more restrictive ambient background concentrations, water effect ratios, water hardness, et cetera. The hope of holding out ambiguous regulatory relief as a method of avoiding treatment costs does not seem consistent with the general trend of regulations, despite the mood of Congress or the public in general.

BADA agencies appreciate the work of EPA staff on the California Toxics Rule. We are willing to provide further data or case studies, if needed, to improve this document.

We have already, and will in the future, optimize and improve the treatment operations, increase pollution prevention and participate in studies to better define the course of action that should be taken to improve the environment and human health.

I thank you for letting me comment.

Response to: CTRH-001-044

See responses to CTR-054-013a, CTR-045-011, CTR-032-004, CTR-056-018, CTR-004-003, CTR-040-039, CTR-040-032, CTR-035-064, and CTR-029-015.

EPA acknowledged that increased angling activity at sites experiencing reductions in toxic contaminants may reflect a shift in activity from substitute sites rather than a net increase. Because EPA could not account for substitute sites in this analysis, EPA estimated lower bound benefits of \$0 (i.e., assuming no net increases in activity; see Chapter 8 of EA).

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Subject Matter Code: E-01e Indirect Dischargers

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Comment ID: CTR-021-011

Comment Author: LeBoeuf, Lamb, Green & MacRae

Document Type: Local Government

State of Origin: CA

Represented Org: City of Sunnyvale

Document Date: 09/25/97

Subject Matter Code: E-01e Indirect Dischargers

References: Letter CTR-021 incorporates by reference letter CTR-035

Attachments? Y

#### CROSS REFERENCES

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Comment: The CTR Inappropriately Extrapolates the Results of Copper and Nickel Industrial Mass Audits to Project the Measures, Cost and Feasibility of Compliance with Organics Limits

The CTR cites the mass audit studies conducted by Sunnyvale and San Jose for copper and nickel as the basis for the estimated \$61,526 cost per significant industrial user (indirect discharger) affected by new permit limits. It is a significant extrapolation, if not distortion, to use the results of those studies to project pollution prevention and waste minimization costs for other constituents, particularly trace organics. Those studies did not address organics and there is minimal basis for assuming that the types of measures recommended to address copper and nickel, and therefore costs, and the number of affected industries (CTR assumes 10-30% of total SIUs) bears any relationship to the costs and numbers of organics from local sanitary sewer dischargers. The measures identified in the mass audits were also the easiest and most cost-effective to implement. In the instances where there were additional potential control measures identified, they were considerably more expensive. EPA ignores non-SIUs which may represent up to as much as 75% of POTW regulated industries.

Response to: CTR-021-011

See the response to CTR-040-037.

EPA disagrees with the commentor's assertion that the costs for San Jose and Sunnyvale cannot be used to extrapolate costs to indirect users at other POTWs. The procedures for identifying indirect sources contributing specific pollutants to POTWs and developing and implementing a source control plan to minimize these discharges are similar for all types of pollutants. Additionally, similar to San Jose and Sunnyvale, metals were the primary pollutants of concern for POTWs evaluated in the cost analysis. Apart from these studies, EPA has no data upon which to establish facility-level compliance costs for indirect dischargers. To account for this uncertainty, EPA has revised its assumption regarding the percentages of indirect dischargers that may incur these costs. The percentage of facilities that may incur these costs was revised from the initial estimate of from 10% to 30% to a new estimate of from 30% to 70%. EPA believes that these new estimates are highly conservative (i.e. tend to overestimate costs).

Average per facility investment costs for industrial participants were estimated using the mass audit studies for copper and nickel pollution prevention projects with paybacks of less than five years. The average cost per indirect discharger was estimated to be \$61,526 or \$15,000 per year at an interest rate of 7 percent and over a period of five years. The total annual costs to the indirect discharger population in California then were estimated by multiplying the annualized cost (\$15,000) by the total number of potentially affected indirect dischargers.

Under the MAS, the pounds removed by the pollution prevention projects with paybacks of less than five years were 560 pounds per year for copper and 148 pounds per year for nickel. Since neither San Jose nor Sunnyvale required nickel reductions under the water quality criteria in the final CTR, EPA did not consider pounds removed. Both San Jose and Sunnyvale did require copper reductions under the high-end cost analysis. For San Jose, copper reductions required to comply with the WQBEL equaled approximately 746 non-toxic-weighted pounds per year, however, for Sunnyvale, required reductions equaled 87 pounds per year. Thus, the MAS indicates that copper reductions would be adequate to meet Sunnyvale's required loading reductions, however, they would not be adequate to meet San Jose's required loading reductions.

EPA estimated the costs for POTWs to implement waste minimization/pollution prevention programs which included capital costs for source controls for indirect dischargers. This double counting of costs associated with waste minimization/pollution prevention will cover any new or additional pollutant reduction that is required of a POTW or indirect discharger to meet the WQBEL. The double counting may be more than enough as 90% reduction is not necessary under the rule, even in San Jose's case. Only a small additional reduction is required, thus, this additional capital could be used to reduce the copper load with controls at indirect dischargers.

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Comment ID: CTR-034-014c

Comment Author: SCAP

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01e Indirect Dischargers

References: Letter CTR-034 incorporates by reference letter CTR-035

Attachments? N

CROSS REFERENCES E-01g08

E-01b

E-01v

J

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Comment: \* In general, we are pleased that EPA prepared an analysis of the economic impacts of the proposed CTR, and that a major portion of EPA's work focused on determining the potential impacts on POTWs. However, we believe that this analysis is based on improper assumptions and inaccurate cost estimates, resulting in unconvincing conclusions. Detailed comments can be found in Attachment 2. A few of the areas of concern are listed below:

\* Small facilities appear to be under represented in EPA's sample of POTWS, especially for minor dischargers.

\* The cost triggers used as regulatory relief thresholds are unrealistic, and are not consistent with EPA regulations and policies.

\* The assumptions used to determine cost estimates for indirect dischargers appear to omit a large proportion of potentially affected industries.

\* The Economic Analysis does not take into account projected population and industrial growth over time, which may influence effluent quality and quantity. Statewide, the population is projected to grow by nearly 50% by 2020.

\* The use of average cost estimates masks economic impacts on individual dischargers, which may be particularly acute for small communities.

\* The economic Analysis ignores the costs that may be incurred by stormwater dischargers and nonpoint sources to reduce loadings so that CTR criteria may be met in ambient waters.

Response to: CTR-034-014c

See responses to CTR-032-004, CTR-035-061, CTR-021-006b, CTR-040-037, CTR-059-018, and CTR-035-048.

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Comment ID: CTR-035-008b

Comment Author: Tri-TAC/CASA

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01e Indirect Dischargers

References:

Attachments? N

CROSS REFERENCES E-01g08

E-01d

E-01m

E-01h

E-01c

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Comment: Finally, we have serious concerns about the accuracy of the draft Economic Analysis and the estimates of the costs and benefits of the draft CTR (see detailed comments in Attachments I and 2). Our primary concerns related to the cost analysis include 1) that the case studies on which the cost analysis is based do not adequately represent the actual population of POTWs in California; 2) the omission of costs that could be incurred by many sectors that contribute to overall loadings, and, hence, can be expected to have to reduce their loadings (e.g., non-SIU indirect dischargers, municipal and industrial stormwater dischargers, agricultural activities, and other nonpoint sources of CTR-regulated pollutants); 3) the use of numerous assumptions that underestimate costs; and 4) the capricious removal of costs that exceed threshold values by assuming that regulatory relief measures will be granted, despite the lack of any proposed regulatory relief trigger in the proposed regulation.

To illustrate the degree of underestimation of costs for the POTW sector alone, we looked at potential compliance costs for the POTW sector. We found that the potential costs for 23 major POTWS. on an annualized basis, may reach \$400 million. We believe that this analysis demonstrates that the potential cost consequences of compliance with effluent limits based on the proposed CTR criteria would easily exceed the \$ 100 million annual cost threshold, especially when the costs of all 313 POTWs in the State are estimated. Thus, we believe that EPA must conclude that the proposed CTR could have significant economic impacts on local governments.

Response to: CTR-035-008b

See responses to CTR-021-005c, CTR-032-004, CTR-040-039, CTR-021-006b, CTR-040-037, and CTR-059-018.

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Comment ID: CTR-035-049

Comment Author: Tri-TAC/CASA

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01e Indirect Dischargers

References:

Attachments? N

CROSS REFERENCES

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Comment: pp. 2-38 - 2-39 (US EPA, 1997b) -- Cost Estimates for Indirect Dischargers By only including Significant Industrial Users (SIUs), EPA drastically underestimated the costs to indirect dischargers to POTWs, and thus to many of the industries of the State. EPA ignores non-SIUs, which may amount to as many as two-thirds of the permitted industries discharging to a POTW. EPA also does not take into account the businesses that POTWs might have to start regulating, such as dentists for source control of mercury, auto repair shops for metals, and veterinarians for pesticides used for flea control (e.g. lindane, diazinon), which could cumulatively number in the thousands. EPA also used assumptions about indirect dischargers based on an analysis of compliance costs for the Great Lakes Initiative, which showed that between 8 and 44 percent of indirect dischargers could be affected by new permit limits on POTWS. EPA used a range of 10 to 30 percent, based on that analysis. EPA appears to have done no analysis of California industries see what the distribution is by SIC code, and then determined what adjustments might be necessary to use a comparison to the Great Lakes States industrial base. Without this, there is simply no evidence that the assumptions used have any validity for the California economy. For instance, at least in some parts of California, a higher proportion of industries are indirect dischargers than is the case elsewhere in the country. Additionally, to estimate individual indirect discharger costs, EPA used figures based on studies in San Jose and Sunnyvale. EPA provides no rationale for extrapolating from a single area and a few limited types of industries to the wide range industries in California, which may have very different products, treatment processes, and waste streams. To do a credible cost analysis, EPA must thoroughly examine the impacts of the CTR on indirect dischargers in California.

Response to: CTR-035-049

See responses to CTR-021-011 and CTR-040-037.

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Comment ID: CTR-041-010c

Comment Author: Sacramento Reg Cnty Sanit Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01e Indirect Dischargers

References:

Attachments? N

CROSS REFERENCES E-01n

E-01m

E-01g

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#### Comment: 5. Concerns Regarding Economic Analysis

The District also has several significant concerns with the Economic Analysis that was performed for the proposed rule. Concerns about the cost estimates made for both the District and the state are presented here. (See attached Review of EPA's Economic Analysis of the Proposed California Water Quality Toxics Rule.) Overall, the District believes that problems with the Economic Analysis are serious enough that it should be redone. As stated above in our analysis of assumed costs at the SRWTP, the use of questionable data without qualification combined with unsubstantiated assumptions regarding costs to achieve compliance resulted in a gross underestimate in the cost-effectiveness ratio. The District's first concern is that if the types of problems found in our Case Study are widespread in other studies, the complete analysis is suspect.

In addition to the analysis of the District's facilities, there are several other points which have been used by EPA to lead to a potentially serious understatement of actual costs. The key assumptions involved are that: 1) no costs would occur if either no monitoring data presently exists or if that data is below analytical detection levels; 2) no treatment costs would occur whenever EPA's initial estimates showed high costs, due to successful regulatory relief; 3) no costs are included for nonpoint sources such as municipal stormwater management systems; and 4) no costs are included for indirect dischargers to the District's system that are not large enough to be considered a Significant Industrial User (SIU).

Regarding the first assumption, the District has found that there is pressure from many sides, including the Safe Drinking Water Act, to both increase the number of constituents being monitored and to lower detection levels to meet numeric criteria set by EPA and the state. To assume that monitoring of these new constituents will not lead to any treatment cost increases is simply unrealistic. Similarly, the second assumption about absolute success in every pursuit of regulatory relief is also overly optimistic. There are no guarantees that pursuit of regulatory relief will be successful in any situation, and EPA indicates elsewhere in the preamble that options such as variances and site-specific criteria will rarely, if ever, be granted.

The third and fourth key assumptions ignore present dominating trends and facts, i.e. that prevention and control of pollutants at their sources, including very small indirect dischargers, storm runoff, and other nonpoint sources are now the major focus of EPA's wastewater programs nationally. While we agree that these management steps should be taken, there will be significant costs attached to the implementation of these steps that cannot be ignored.

Combined with concerns the District has heard from other sources such as the California Association of Sanitation Agencies (CASA), it appears that EPA has failed to make "a reasoned determination that the benefits of the intended regulation justify its costs." Therefore the District believes that the Agency is obligated to redo the draft Economic Analysis.

Response to: CTR-041-010c

See responses to CTR-032-004, CTR-021-006b, CTR-040-037, and CTR-003-011.

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Comment ID: CTR-056-022a  
Comment Author: East Bay Municipal Util. Dist.  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/22/97  
Subject Matter Code: E-01e Indirect Dischargers  
References: Letter CTR-056 incorporates by reference letter CTR-054  
Attachments? N  
CROSS REFERENCES S

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Comment: EBMUD perceives there to be a significant overall economic impact resulting from CTR, contrary to the conclusions reached by EPA. Because the cost may exceed \$100 million annually on the regulated community (the majority of which are publicly owned agencies), it appears that pursuant to Executive Order 12,866 and the Unfunded Mandates Reform Act, the CTR can be considered a significant regulatory action which is likely to adversely affect the economy of many regions of the State, the environment and/or local governments. EBMUD is also of the opinion that EPA failed to make a, "...reasoned determination that the benefits of the intended regulation justify its costs," and is obligated to redo the draft Economic Analysis and submit it for review by the Office of Management and Budget.

Response to: CTR-056-022a

See response to CTR-021-005c.

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Comment ID: CTR-092-020  
Comment Author: City of San Jose, California  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01e Indirect Dischargers  
References: Letter CTR-092 incorporates by reference letter CTR-035  
Attachments? Y  
CROSS REFERENCES

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Comment: Comment #4: Policy Assumptions re Indirect Dischargers

On page 2-38 of the Analysis of Potential Costs it states:

"...it was assumed that many POTW's will select the option of controlling discharges to their collection system as a cost-effective means to comply with permit limits".

Questions for EPA on Comment #4:

The specifics of San Jose/Santa Clara's copper limit and permit performance, as detailed below, raise

several global economic analysis methodological questions. For example, in the case

a) substantial, costly, pollution prevention and pre-treatment programs are already in place for most Indirect Dischargers; b) the emphasis on point sources has reduced influent concentrations to the Plant to levels where there is no longer a significant correlation of influent concentrations to effluent concentrations; c) 90% of copper is routinely removed from the influent at the San Jose/Santa Clara POTW, making further source control only marginally effective; and d) the POTW's wastewater effluent can be proven to be very close to CTR criteria, on average; yet e) portions of the receiving waters do not meet the suggested criteria, it seems capricious and arbitrary to assume that POTW's will opt to make Indirect Dischargers responsible for additional costs, as the source of the bulk of the copper is clearly not from the Indirect Dischargers, and the attainment of the CTR criteria in the receiving water will not occur by asking these sources to make further reductions.

Q.4-1) How many of the Indirect Dischargers are operating in a POTW environment where EPA's assumption would be appropriate? How many are not?

Q.4-2) How would the EPA estimates of POTW costs vs. Indirect Dischargers cost change if this assumption about cost effectiveness were changed?

Q.4-3) With respect to costs, have any measures been employed in this analysis to recognize cumulative costs of efforts undertaken to date? To identify where dischargers (indirect or direct) are on the scale of operating economies? To identify if point source pollution reduction efforts have been successful, thus spending additional monies will be only minimally productive?

Response to: CTR-092-020

The City of San Jose (San Jose) challenges the economic analysis methodology based on its particular experience in the control of toxic substances. In particular, San Jose states that because major pollution prevention efforts have already been conducted at the San Jose/Santa Clara POTW, pollution prevention is not expected to be a successful alternative for compliance with the projected CTR-based copper limit. EPA disagrees with San Jose's statement and addresses specific concerns in the following paragraphs.

San Jose indicates that although San Jose/Santa Clara facility's copper effluent concentration can be shown to be very close to the CTR-based limit, portions of the receiving water do not meet the suggested standard. EPA agrees with San Jose that the San Jose/Santa Clara facility's copper effluent concentrations are reported most often in compliance with the projected CTR-based limit, thus, estimated compliance costs are not sizable. EPA considers, however, San Jose's statement regarding some portions of the receiving water not being in compliance to be vague. If portions of the receiving water would not meet water quality standards when the San Jose/Santa Clara discharge is in compliance with its CTR-based permit limit, then a TMDL may need to be developed for the water body to ensure water quality protection. If the TMDL shows that water quality standards violations are caused by neighboring sources, then these sources would need to be controlled and related costs would not be attributed to the San Jose/Santa Clara facility.

San Jose states that it seems capricious and arbitrary to assume that POTWs will opt to make indirect dischargers responsible for pollution control costs when this may not be the case. EPA believes that San Jose's statement is inaccurate. The EPA's Economic Analysis estimates a statewide cost and is based on assumptions that apply to the majority of dischargers. If an individual facility, such as San Jose, believes that further controls on indirect dischargers are not necessary, then this specific situation would need to be addressed by the facility in a different manner. In order to account for this situation, EPA

assumed in its economic analysis that 30% of indirect dischargers would be impacted in the high scenario and 70% of indirect dischargers would be impacted in the low scenario which reflects that a greater proportion of the implementation costs would fall on POTWs under the high scenario. Nonetheless, EPA believes that the largest portion of toxic constituents received by POTWs are from indirect dischargers, thus pollution prevention, including source control efforts, will be able to ensure compliance with projected CTR-based limits.

Regarding San Jose's question about how many indirect dischargers would be targeted to reduce toxic discharges to POTWs (Q.4-1), EPA did not have adequate information to evaluate all individual indirect dischargers as part of its economic analysis, thus EPA is not able to give numerical estimates of the exact number of indirect dischargers discharging to POTWs that will be affected by this rule. However, to compensate for data limitations, EPA increased its estimate of indirect dischargers affected by the CTR from 10% to 30% used in the proposal to 30 to 70% used in the economic analysis for the final rule. EPA believes that this assumption dramatically overstates the number of dischargers affected by the CTR, but has done so to ensure that costs remain conservative, i.e., erring on the side of higher costs.

San Jose's second question (Q.4-2) is incomplete and, thus, EPA cannot prepare a response. San Jose is asking how costs would change if the assumptions used to estimate indirect costs were different, however San Jose does not indicate what the new assumptions would be. There are numerous other assumptions which could be employed to estimate indirect costs, however EPA cannot address them all and feels that the methodology used in the Economic Analysis was reasonable.

In response to San Jose's third question (Q.4-3), EPA did consider documented pollution prevention efforts implemented by the sample facilities in its evaluation and estimation of costs. However, having a successfully implemented pollution prevention program does not automatically disqualify a facility from being assigned pollution prevention costs in EPA's economic analysis. In the case of San Jose, effluent concentrations for copper and silver are reported below projected CTR-based effluent limits for all except one data point. Under this high compliance rate, addition of treatment is not justified, and EPA estimates that the facility would implement a pollution prevention program to ensure continued compliance (e.g., by addressing intermittent discharges). In addition, it should be noted that a pollution prevention program implemented to achieve an existing limit, although successful, may not necessarily comprise the same activities and level of effort as a program that would be implemented to ensure compliance with a new and more stringent limit (i.e., a CTR-based effluent limit).

See also response to CTR-004-003.

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Subject Matter Code: E-01e01 Sunnyvale/San Jose

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Comment ID: CTR-059-020

Comment Author: Los Angeles County Sanit. Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01e01 Sunnyvale/San Jose

References: Letter CTR-059 incorporates by reference letter CTR-035

Attachments? Y

#### CROSS REFERENCES

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Comment: Economic Analysis

The Sanitation Districts commends EPA for preparing an analysis of the economic impacts of the proposed CTR, and for selecting POTWs for half of the case studies. We believe that EPA is correct in thinking that POTWs are likely to experience major impacts as a result of the promulgation of the CTR. However, we believe that this analysis is based on improper assumptions and inaccurate cost estimates, resulting in unconvincing conclusions. Our own attainability and cost analysis indicates that there are indeed fundamental flaws in the cost analysis. A few of the areas of concern are listed below:

\* The assumptions used to determine cost estimates for indirect dischargers, such as only considering significant industrial users (SIUs), assuming that only 10 to 30 percent of the SIUs would be required to implement control measures, and estimating that the average cost per indirect discharger would be just \$15,000 per year, appear to omit a large proportion of potentially affected industries and drastically underestimate potential costs.

Response to: CTR-059-020

See responses to CTR-021-011 and CTR-040-037.

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Comment ID: CTR-092-018

Comment Author: City of San Jose, California

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01e01 Sunnyvale/San Jose

References: Letter CTR-092 incorporates by reference letter CTR-035

Attachments? Y

#### CROSS REFERENCES

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Comment: Comment #2: Estimation of Costs for Indirect Dischargers

[Re: Page 4-9 of the Economic Analysis; also Page 2-38 of the "Analysis of Potential Costs Related to the Implementation of the California Water Quality Toxics Rule"]

The methodology for estimating costs of implementing the CTR for all the Indirect Dischargers in the state relies on data from the October 1994 Mass Audit Studies (MAS) prepared by indirect dischargers for the San Jose/Santa Clara and Sunnyvale POTW'S. The pages cited above state that "...the average cost per indirect discharger was estimated to be \$61,526 or \$15,000 per year..."; the former figure being a raw project cost, and the latter, an annualized payment, assuming 5 year amortization at a 7% interest.

Our review of the San Jose/Santa Clara (only)-related MAS data, as tallied in the October 1994 report, presents a very different "average" picture. Specifically, the average per facility project cost figure which can be documented is \$135,017 for both copper and nickel projects. Using the same financing assumptions as EPA, that raw cost would generate an annualized cost per facility of more than \$30,000 per year.

We believe that these findings cast serious doubt on how the data were interpreted and then utilized for the estimate of costs to Indirect Dischargers. The City has further strong concerns about the validity of using data for projects related to only two priority pollutants (copper and nickel) to represent costs, statewide, for the multitude of pollutants which Indirect Dischargers (and the City) may now be faced with compliance on, given implementation of the CTR.

Of further concern is that the range of project costs for San Jose/Santa Clara Indirect Dischargers is from \$2,940 to \$928,100 per facility for copper removal projects and \$500 to \$543,565 per facility for nickel removal projects. Use of a single average cost to represent these widely variable ranges substantially obscures the real cost impacts on the local level and on individual businesses.

Questions for EPA on Comment #2:

Q.2- 1) Based on the San Jose/Santa Clara MAS data which was given to EPA, as cited above, how could the inclusion of Sunnyvale data with San Jose/Santa Clara MAS data bring the average raw cost per facility down from approximately \$135,000 to just over \$61,500?

Q.2-2) Given the MAS data cited above, it seems unreasonable to allow an average figure to serve as a proxy for costs for Indirect Dischargers statewide. Did EPA undertake some sensitivity analysis to explain the impact of a widely variable range of potential project costs and how that would affect costs to individual Indirect Dischargers as well as costs to the group of Indirect Dischargers?

Q.2-3) How did EPA test for the validity of using data focused on the costs of removing only two priority pollutants by the Indirect Dischargers in one Northern California subregion to represent Indirect Dischargers, with all possible combinations of pollutants as priorities, throughout the State?

Q.2-4) Did EPA determine that the number of pounds of pollutants removed under the five year payback scenario would be sufficient to meet the CTR standards? If not, then perhaps that scenario should be tested, as it may be necessary for the Indirect Dischargers to move to the next level of removal projects analysis (the 90% removal scenario). The per pound costs of doing so can be shown to increase by a factor of over 30 times, which will have a substantial effect on the per facility cost of meeting the CTR and, therefore, change the conclusions of the current analysis.

Response to: CTR-092-018

See responses to CTR-021-011 and CTR-035-048.

Subject Matter Code: E-01e02 No Costs for Non-SIUs

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Comment ID: CTR-040-037

Comment Author: County of Sacramento Water Div

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01e02 No Costs for Non-SIUs

References: Letter CTR-040 incorporates by reference letter CTR-027

Attachments? Y

#### CROSS REFERENCES

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Comment: EPA's estimates for indirect dischargers is confined to "significant industrial users" (SIUs) and ignores small industrial and commercial establishments that can be sources of toxic pollutants (e.g., vehicle service businesses, printers, dentists, etc.). In most cases, where toxic pollutants exist at levels of concern in effluent, they are not the result of SIU discharges; they are from either residential or commercial sources.

Response to: CTR-040-037

Since non-SIUs are typically not the focus of POTW regulatory programs, the Agency has assumed that the costs to control discharges from non-SIUs will be born primarily by the POTW. EPA's consideration of non-SIUs, therefore, is built into the waste minimization costs allocated to POTWs. For example, the waste minimization costs assumed for POTWs include components such as source identification, outreach and training, and source reduction strategies. These measures have been used successfully by POTWs to reduce discharges of specific pollutants from non-SIUs (e.g., mercury, silver) without imposing costly end-of-pipe treatment.

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Comment ID: CTR-041-033

Comment Author: Sacramento Reg Cnty Sanit Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01e02 No Costs for Non-SIUs

References:

Attachments? N

#### CROSS REFERENCES

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Comment: EPA's estimates for indirect dischargers is confined to "significant industrial users" (SIUs) and ignores small industrial and commercial establishments that can be sources of toxic pollutants (e.g., vehicle service businesses printers, dentists, etc.). In most cases, where toxic pollutants exist at levels of concern in effluent, they are not the result of SIU discharges; they are from either residential or commercial sources.

Response to: CTR-041-033

See response to CTR-040-037.

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Comment ID: CTR-043-003

Comment Author: City of Vacaville

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01e02 No Costs for Non-SIUs

References:

Attachments? Y

CROSS REFERENCES

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Comment: As background, the City of Vacaville owns and operates two wastewater treatment plants. The Easterly Plant has a capacity of 10 million gallons per day (mgd) and discharges to Old Alamo Creek, an effluent-dependent stream with little or no natural flow during much of the year. The Gibson Canyon Creek Plant has a capacity of 1.4 mgd and discharges to a small creek with the same name. The City has reviewed the proposed CTR with respect to its potential impact on the Easterly Plant. Because the Gibson Canyon Creek Plant serves two industrial dischargers, the City did not evaluate it with respect to the proposed CTR. Additionally, due to the City's population (< 100,000) stormwater has not been monitored for toxic pollutants. However, based on the Easterly Plant review, the City is concerned about the potential impact of the proposed rule on the City's municipal wastewater and on future stormwater operations.

Since 1993, the City has conducted an effluent and receiving water quality assessment with respect to the Easterly Plant. The purpose of the assessment was to characterize toxic pollutant levels in the plant effluent and the receiving water and to determine whether the discharge had a reasonable potential to cause or contribute to an exceedance of either existing or potential water quality objectives for toxic pollutants. The results of this assessment have formed the basis for the City's review of the proposed CTR.

3. The proposed rule could cost the City approximately \$4.2 million annually without providing commensurate environmental benefits. The Regional Board does not allow the City a dilution credit and therefore we would have to achieve the CTR criteria in our undiluted effluent. A review of our effluent data indicates we would be unable to attain effluents based on the human health criteria for three carcinogens -- gamma-BHC, chloroform, and dibromochloromethane (see Attachment). The reductions in effluent levels necessary to achieve these criteria vary between 27% for gamma-BHC to 88% for dibromochloromethane. These types of reductions would not be achievable through pollution prevention. Thus, end-of-pipe treatment would be required, most likely carbon adsorption. Using EPA's estimate of costs for a 10 mgd carbon adsorption facility for the City of Merced case study, the capital cost of the facility would be \$10.7 million and the annual cost would be \$4.2 million (7%, 10 years). It is questionable whether this substantial cost would bring about much benefit in an effluent-dependent stream.

Response to: CTR-043-003

See responses to CTR-021-008, CTR-056-018, CTR-004-003, and CTR-021-008.

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Comment ID: CTR-044-028  
Comment Author: City of Woodland  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01e02 No Costs for Non-SIUs  
References:  
Attachments? N  
CROSS REFERENCES

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Comment: EPA's estimates for indirect dischargers is confined to "significant industrial users" (SIUs) and ignores small industrial and commercial establishments that can be sources of toxic pollutants (e.g., vehicle service businesses printers, dentists, etc.). In most cases, where toxic pollutants exist at levels of concern in effluent, they are not the result of SIU discharges; they are from either residential or commercial sources.

Response to: CTR-044-028

See response to CTR-040-037.

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Comment ID: CTR-054-032  
Comment Author: Bay Area Dischargers Associati  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01e02 No Costs for Non-SIUs  
References:  
Attachments? N  
CROSS REFERENCES

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Comment: EPA's estimates for indirect dischargers is confined to "significant industrial users" (SIUs) and ignores small industrial and commercial establishments that can be sources of toxic pollutants (e.g., vehicle service businesses printers, dentists, etc.). In most cases, where toxic pollutants exist at levels of concern in effluent, they are not the result of SIU discharges; they are from either residential or commercial sources.

Response to: CTR-054-032

See response to CTR-040-037.

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Subject Matter Code: E-01e03 No Savings from Poll. Red

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Comment ID: CTR-092-019

Comment Author: City of San Jose, California

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01e03 No Savings from Poll. Red

References: Letter CTR-092 incorporates by reference letter CTR-035

Attachments? Y

**CROSS REFERENCES**

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Comment: Comment #3: Net Costs of MAS Projects

The EPA document entitled "Analysis of Potential Costs Related to the Implementation of the California Water Quality Toxics Rule" describes the agency's interpretation of the Mass Audit study information provided by the City of San Jose for use in preparing the CTR. On page 2-39 of that document it states that:

"The studies concluded that substantial discounted net savings could accrue to their indirect industrial dischargers by implementing pollution reduction projects for which the payback period is five years or less."

Questions for EPA on Comment #3:

Q.3- 1) Isn't this statement appropriate only if the indirect discharger(s) accepts the analyst's financing and business operation assumptions, i.e. that project costs were annualized and then offset by annual operating savings? Even then would there be net savings before project costs were completely offset in approximately five years?

Q.3-2) For those dischargers who chose to pay for pollution reduction projects from current operating monies, isn't the time gap between cost offset and accumulated operating savings even longer? Is there not also the additional, (uncalculated) cost of the opportunity cost of business capital?

Q.3-3) San Jose's findings were that, for the aggregate of MAS dischargers, on an undiscounted, per pound of pollutant removed basis, there were net costs for the copper removal projects, not net savings, which effectively lengthened the payback period. How were these findings incorporated into this analysis?

Q.3-4 San Jose further found that the per pound savings (again undiscounted) for the nickel removal projects would hardly be considered substantial for most large indirect dischargers. How did EPA define "substantial"?

Response to: CTR-092-019

EPA's analysis does not include the costs of coming into compliance with existing permit limits as part of CTR compliance costs because these costs will be incurred regardless of the implementation of the CTR. In EPA's revised economic analysis of the final CTR, San Jose's high-end and low-end costs are

estimated to be \$300,000 per year and \$57,000 per year, respectively. The extrapolated costs attributed to San Jose in the high and low scenarios are \$750,000 and \$140,000, respectively, or 1.2% and 0.5% of the total projected annual costs.

For sites included in the San Jose mass audit study (MAS) that reported a payback of 5 years or less, the MAS reports aggregate total costs (over 5 years or less) for copper projects of \$2.5 million compared to an annual operating cost savings of \$1.7 million, resulting in an average overall payback period of 1.5 years. The MAS also reports aggregate total costs for nickel projects of \$1.7 million versus an annual operating cost savings of \$2.3 million for an average overall payback period of 0.75 years (MAS, 1994). The MAS does not consider alternate financing or accounting practices. In using the San Jose MAS costs, EPA did not consider that any savings would be realized and financed the entire costs at seven percent over the five years. Factoring in the operating cost savings would have resulted in lower costs over this same period.

EPA believes that the O&M savings for the nickel removal projects for most large indirect dischargers are too speculative and specific to dischargers in the South Bay area to apply to other POTWs throughout California, thus EPA discounted the savings component to add a measure of conservatism when estimating costs to the indirect discharger population.

Reference: City of San Jose, San Jose/Santa Clara Water Pollution Control Plant, 1994. Industrial Mass Audit Studies Summary Report.

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